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Application No. 10/628,574
Amendment dated November 23, 2005
Reply to Office Action of August 23, 2005

- REMARKS/ARGUMENTS -

Claims 1 to 23 remain in the application.

102 Claim Rejections

Claims 1 to 7, 9 to 13 and 15 to 23 were rejected under 35 U.S.C. 102(b) as being anticipated by Arnett (US Patent No. 4,391,092).

Reconsideration by the Examiner is respectfully requested on the following grounds.

Arnett discloses a multi-position actuator 28 comprising three piston and cylinder combinations telescoped within each other.

The first piston assembly is formed by actuation piston 32 and first cylinder 144. The flange or piston head 147 of piston 32 is operable to move between the closed end of the first cylinder 144 and a position where it is stopped by abutment to a first nut 140 (see column 5, lines 45 to 48). Piston 32 is thus only movable between limit positions in the first cylinder, the limit positions being fixed by abutment at opposed axial ends of the first cylinder 144. This is contrary to independent claims 1, 11, 17, 20 and 23.

The first piston assembly is telescoped into a second cylinder 156. The first piston assembly is movable between the closed end of the second cylinder 156 and a position where it is stopped by abutment to a second nut 142 provided at the opposed end of the second cylinder (see column 5, lines 77 and 78, and column 6, lines 1 and 2). The position of the first piston assembly in the second cylinder 156 is thus solely fixed by physical abutments at opposed ends of the second cylinder 156. Again, this is contrary to claims 1, 11, 17, 20 and 23.

Arnett's second piston assembly, formed by the first piston assembly in the second cylinder 156, is slidably mounted in a third cylinder 104. The second piston assembly is movable between the closed end of the third cylinder 104 and a position where it is stopped by abutment to an end cap 176 provided at an opposed end of the third cylinder 104 (see column 6, lines 22 to 24). Therefore, the position of the second cylinder 156 in the third cylinder 104 is solely fixed by physical abutments provided at opposed ends of the third

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cylinder 104. As mentioned hereinabove, this is contrary to independent claims 1, 11, 17, 20 and 23.

It is respectfully submitted that pressure ports 178, 180 and 182 are respectively never blocked or covered by second cylinder 156, first cylinder 144 and piston head 147. Indeed, slot 164 in the second cylinder 156 ensures that port 180 remains in flow communication with chamber 156, irrespective of the position of the second cylinder 156 in the third cylinder 104. Similarly, pressure port 182 remains in flow communication with chamber 154 at all times via axially extending slot 102 in the first cylinder 144. Accordingly, the axial location of the ports 178, 180 and 182 could be changed without affecting the position of the first and second sliding cylinders 144 and 156 and the piston head 147. It is not the location of the ports that sets the positions of the first and second cylinders and the piston head; rather, the position is established by physical abutment.

The piston head 147, the first cylinder 144 and the second cylinder 156 cannot be immobilized in an intermediate position corresponding to the axial location of the associated pressure ports 178, 180 and 182. It can be readily seen from Figure 2 that the positions of the piston head 147, first cylinder 144 and second cylinder 156 do not correspond with the axial location of the pressure ports 178, 180 and 182. In view of the foregoing, Arnett fails to anticipate, or even renders obvious, independent claims 1, 11, 17, 20 and 23.

The remaining claims, depending directly or indirectly from the above-mentioned independent claims, are patentable for at least the reasons set forth above with respect to the independent claims.

Claim 1 was further rejected under 35 U.S.C. 102 (b) as being anticipated by Torell (US Patent No. 2,863,601).

Reconsideration is expected on the following grounds.

Torell's piston position in cylinder 42 is determined by the differential of pressure at opposed ends of the cylinder 42 and, thus, not by the axial location of ports 44 in cylinder 42. When the piston is displaced to the right-hand side of the cylinder 42, it is the pressure fed from the

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left-hand side port 44 that maintains the piston 34 in position in abutment against the right-hand side end of the cylinder. The right-hand side port 44 has no role in that position.

Likewise, when the piston is displaced to the left-hand side of the cylinder, the left-hand side port cannot fix the position of the piston, since the left-hand side port is covered or blocked by the piston. Torell's piston and cylinder arrangement operates in a very different way from the claimed invention.

In view of the foregoing, independent claim 1 is clearly patentable over Torell.

It is therefore submitted that claims 1 to 23 are in condition for allowance. Reconsideration of the Examiner's rejections is respectfully requested.

Should there be any questions concerning this amendment or the application in general, the Examiner is respectfully urged to telephone the undersigned, so that prosecution of this application can be expedited.

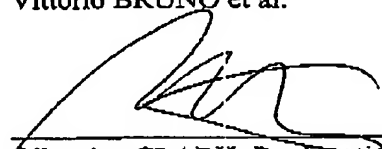
Respectfully submitted,

Vittorio BRUNO et al.

By:


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Date


Sébastien CLARK, Registration No. 56,651
Agent of Record
OGILVY RENAULT LLP
1981 McGill College Avenue, #1600
Montreal, Quebec, Canada H3A 2Y3
Tel.: (514) 847-4259

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